1076817426/10/2007

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(FILE 'HOME' ENTERED AT 17:42:54 ON 26 OCT 2007)

FILE 'REGISTRY' ENTERED AT 17:43:05 ON 26 OCT 2007
L1 1 S 603129-00-6
L2 1 S 756529-94-9
L3 1 S 756529-95-0

FILE 'HCAPLUS' ENTERED AT 17:44:17 ON 26 OCT 2007
L4 2 S L1
L5 3 S L2
L6 1 S L3
L7 1 S L4 AND L5 AND L6
L8 1 S L4 AND L5
L9 4 S L4 OR L5 OR L6
L10 3 S L9 NOT L7

FILE 'STNGUIDE' ENTERED AT 17:46:06 ON 26 OCT 2007

FILE 'REGISTRY' ENTERED AT 17:55:04 ON 26 OCT 2007
L11 STRUCTURE UPLOADED
L12 1 S L11 SSS SAM

FILE 'STNGUIDE' ENTERED AT 17:56:05 ON 26 OCT 2007

FILE 'REGISTRY' ENTERED AT 17:57:19 ON 26 OCT 2007
L13 STRUCTURE UPLOADED
L14 1 S L13 SSS SAM

FILE 'STNGUIDE' ENTERED AT 17:58:12 ON 26 OCT 2007

FILE 'REGISTRY' ENTERED AT 18:00:19 ON 26 OCT 2007
L15 STRUCTURE UPLOADED
L16 15 S L15 SSS SAM
L17 STRUCTURE UPLOADED
L18 5 S L17 SSS SAM
L19 166 S L17 SSS FULL

FILE 'HCAPLUS' ENTERED AT 18:02:45 ON 26 OCT 2007
L20 451 S L19

FILE 'STNGUIDE' ENTERED AT 18:02:51 ON 26 OCT 2007

FILE 'REGISTRY' ENTERED AT 18:05:40 ON 26 OCT 2007
L21 STRUCTURE UPLOADED
L22 20 S L21 SSS SAM
L23 2186 S L21 SSS FULL

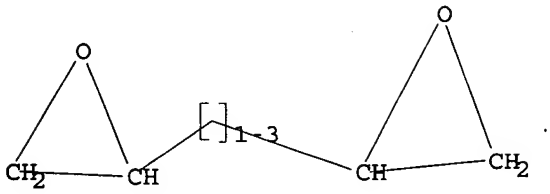
FILE 'HCAPLUS' ENTERED AT 18:06:29 ON 26 OCT 2007
L24 1557 S L23
L25 9 S L24 AND L20

FILE 'STNGUIDE' ENTERED AT 18:07:11 ON 26 OCT 2007

FILE 'HCAPLUS' ENTERED AT 18:09:50 ON 26 OCT 2007
L26 4157 S HYPERBRANCH?
L27 1 S L20 AND L26
L28 2 S L24 AND L26

FILE 'STNGUIDE' ENTERED AT 18:12:21 ON 26 OCT 2007

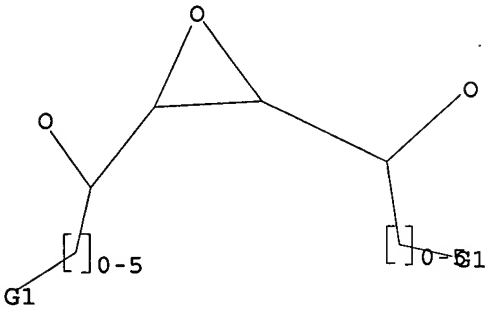
=> d l17
L17 HAS NO ANSWERS
L17 STR



Structure attributes must be viewed using STN Express query preparation.

L21 STRUCTURE UPLOADED

=> d l21
L21 HAS NO ANSWERS
L21 STR



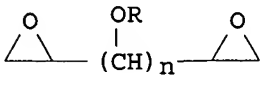
G1 C,H,O

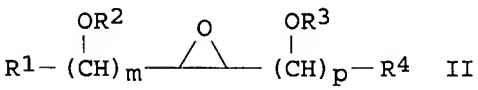
Structure attributes must be viewed using STN Express query preparation.

L25 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:756387 HCAPLUS
DOCUMENT NUMBER: 141:282877
TITLE: Highly branched polymers for biocompatible medical hydrogels and their manufacture from anhydrosugar alcohols
INVENTOR(S): Kaga, Haruo; Kakuchi, Toyoji; Sato, Toshifumi; Imai, Tomoko
PATENT ASSIGNEE(S): National Institute of Advanced Industrial Science and Technology, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004256804	A	20040916	JP 2004-27160	20040203
JP 3721389	B2	20051130		
US 2005010023	A1	20050113	US 2004-768174	20040202
PRIORITY APPLN. INFO.:			JP 2003-26406 A	20030203

GI


I


II

L25 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:1000504 HCAPLUS
DOCUMENT NUMBER: 141:242819
TITLE: Product class 4: organometallic complexes of copper
AUTHOR(S): Heaney, H.; Christie, S.
CORPORATE SOURCE: Dept. of Chemistry, University of Loughborough, Loughborough, LE11 3TU, UK
SOURCE: Science of Synthesis (2004), 3, 305-662
CODEN: SSCYJ9
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The use of copper and related complexes in applications to organic synthesis is reviewed.
AN 2003:1000504 HCAPLUS
DN 141:242819
RN 142-71-2

L25 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:323389 HCAPLUS
DOCUMENT NUMBER: 127:34429
TITLE: A practical approach to the synthesis of dianhydro sugars
AUTHOR(S): Lohray, Braj B.; Chatterjee, Manashi; Jayamma, Yaruva
CORPORATE SOURCE: Basic Research and Drug Discovery, Dr. Reddy's Research Foundation, Hyderabad, 500 138, India
SOURCE: Synthetic Communications (1997), 27(10), 1711-1724
CODEN: SYNCAV; ISSN: 0039-7911
PUBLISHER: Dekker
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:34429

AB Chiral tetrols derived from various carbohydrate precursors have been converted into the corresponding dianhydro sugar derivs. in a one pot procedure. The course of reaction very much depends upon the protecting groups used. In case of D-mannitol and sorbitol, it has been shown that when 3,4-hydroxy groups are protected as trans-acetonide group, the present methodol. furnished exclusively 1,2: 5,6-dianhydro derivs. in excellent yield. However, if the 3,4-hydroxy groups are protected with benzyl group a mixture of products consisting of dianhydro sugar, a furan and a bicyclo[2.2.2]octane derivs. were obtained. This method has also been used to synthesize dianhydro sugars in which the two diol moieties are placed adjacent to each other or separated by one or more carbon atoms.

AN 1997:323389 HCAPLUS
DN 127:34429

L25 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:527529 HCAPLUS
DOCUMENT NUMBER: 121:127529
TITLE: SOS induction in Escherichia coli and Salmonella mutagenicity: a comparison using 330 compounds
AUTHOR(S): Mersch-Sundermann, Volker; Schneider, Uli; Klopman, Gilles; Rosenkranz, Herbert S.
CORPORATE SOURCE: Fac. Clin. Med., Univ. Heidelberg, Germany
SOURCE: Mutagenesis (1994), 9(3), 205-24
CODEN: MUTAEX; ISSN: 0267-8357
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To examine the concordance of two microbial genotoxicity short-term assays, 330 exptl. results for the SOS chromotest using tester strain Escherichia coli PQ37 were compared with the results of the Salmonella/mammalian microsome mutagenicity assay with Salmonella typhimurium TA97, TA98, TA100, TA102, TA104, TA1535, TA1537 and/or TA1538. With respect to qual. features, the concordance between SOS chromotest and Salmonella mutagenicity test results was 86.4% (sensitivity, 78.6%; specificity, 100%; $\chi 2$ = 188.6). None of the non-mutagens (N = 120) were able to induce the SOS system. Addnl., 45 of the 210 S. typhimurium mutagens (21.5%) did not induce the SOS repair system. On closer examination, the majority of these 45 compds. (84%) were mutagens with activities between 0.001 and 10 rev/nmol. Even though the exptl. protocols of both systems were not standardized, the correlation coefficient for the exptl. results of the two test systems was 0.7 for the 330 chems. Except for aliphatic epoxides (r = 0.47), the mutagenicity/SOS induction correlations for congeneric data sets (polycyclic aromatic hydrocarbons, nitroarenes, nitroarenofurans, mycotoxins) were even better (r = 0.72-0.95). Addnl., computer automated structure evaluation (CASE) analyses of the nature of the structural determinants associated with each endpoint indicate extensive homologies. The data can be taken to indicate that the two phenomena reflect common mechanisms of action.

AN 1994:527529 HCAPLUS
DN 121:127529

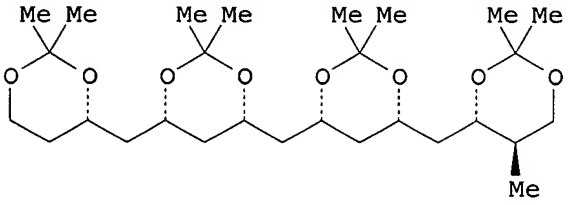
L25 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:508321 HCAPLUS
DOCUMENT NUMBER: 115:108321
TITLE: Structure-activity relationships of epoxides: induction of sister-chromatid exchanges in Chinese hamster V79 cells
AUTHOR(S): Von der Hude, Wilhelm; Carstensen, Silke; Obe, Guenter
CORPORATE SOURCE: Inst. Allgemeine Genet., Freie Univ. Berlin, Berlin, D-1000/33, Germany
SOURCE: Mutation Research, Fundamental and Molecular Mechanisms of Mutagenesis (1991), 249(1), 55-70
CODEN: MUREAV; ISSN: 0027-5107
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Anal. of sister chromatid exchange (SCE) frequencies in Chinese hamster V-79 cells was used to investigate structure-activity relationships of epoxides in mammalian cells. For this purpose, the SCE-inducing potency of 58 epoxides was determined Of these, 16 failed to induce SCE in V-79 cells. According to the substitution of the oxirane ring, the results show general agreement with results obtained in the Ames test. Mono-substituted epoxides had the highest genotoxic potency compared to di- and tri-substituted epoxides. In detail, there are differences in genotoxic potency between bacterial and mammalian cells which can be explained by differences in the cellular uptake of the compds. and by detoxification reactions.

AN 1991:508321 HCAPLUS
DN 115:108321
RN 75-56-9
RN 96-09-3

L25 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1990:586409 HCAPLUS
DOCUMENT NUMBER: 113:186409
TITLE: Epoxides: comparison of the induction of SOS repair in Escherichia coli PQ37 and the bacterial mutagenicity in the Ames test
AUTHOR(S): Von der Hude, Wilhelm; Seelbach, Angelika; Basler, Armin
CORPORATE SOURCE: Inst. Allg. Genet., FU Berlin, Berlin, D-1000/33, Germany
SOURCE: Mutation Research, Fundamental and Molecular Mechanisms of Mutagenesis (1990), 231(2), 205-18
CODEN: MUREAV; ISSN: 0027-5107
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The genotoxicity of 51 epoxides is studied with the SOS-Chromotest using E. coli PQ37 as tester strain. The results obtained with this test system are compared with results of the Ames test. Of 51 epoxides, 39 are mutagenic in Salmonella typhimurium whereas only 27 mutagenic epoxides induced the SOS response in E. coli PQ37.
AN 1990:586409 HCAPLUS
DN 113:186409
RN 75-56-9

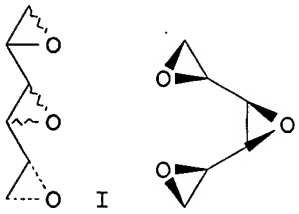
L25 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:497019 HCAPLUS
DOCUMENT NUMBER: 107:97019
TITLE: Two directional chain synthesis. The enantioselective preparation of syn-skipped polyol chains from meso precursors
AUTHOR(S): Schreiber, Stuart L.; Goulet, Mark T.; Schulte, Gayle
CORPORATE SOURCE: Dep. Chem., Yale Univ., New Haven, CT, 06511, USA
SOURCE: Journal of the American Chemical Society (1987), 109(15), 4718-20
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 107:97019
GI



I

AB The Sharpless asym. epoxidn. can proceed with enantiotropic group selectivity and is capable of converting achiral, meso-compds. into either of two antipodal products and with enhanced levels of enantiomeric purity. These reactions provide a solution to the problem of terminus differentiation presented by the two-directional synthesis strategy that utilizes achiral chains. The two-directional chain synthesis strategy is illustrated by the enantiodivergent preparation of syn-skipped polyol chains, e.g. I. The relevance of this work to structural studies of the polyene macrolide class is discussed.
AN 1987:497019 HCAPLUS
DN 107:97019

L25 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1987:138711 HCAPLUS
DOCUMENT NUMBER: 106:138711
TITLE: Synthesis of some isomeric triepoxides of 1,3,5-hexatriene from hexitols
AUTHOR(S): Koell, Peter; Kopf, Juergen; Metzger, Juergen O.; Schwarting, Walter; Oelting, Michael
CORPORATE SOURCE: Fachbereich Chem., Univ. Oldenburg, Oldenburg, D-2900, Fed. Rep. Ger.
SOURCE: Liebigs Annalen der Chemie (1987), (3), 199-204
CODEN: LACHDL; ISSN: 0170-2041
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 106:138711
GI



I II

AB Payne oxidation of the known erythro and D-threo (E)-1,2:5,6-dianhydrohex-3-enitols yielded the conjugated triepoxides DL-gluco-I, D-ido-I and D-manno-I. Analogous triple epoxidn. of 1,3,5-hexatriene was also studied but gave unsatisfactory results, despite the isolation of 2% of the triepoxide II. The stereochem. of D-ido-I was proved by x-ray structural anal. thus indirectly also confirming the configuration of D-manno-I. D-ido-I adopts in the crystal a crescent-shaped conformation with almost gauche arrangement of neighboring O atoms.
AN 1987:138711 HCAPLUS

L25 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:31682 HCAPLUS
DOCUMENT NUMBER: 62:31682
ORIGINAL REFERENCE NO.: 62:5638e-f
TITLE: An enzyme catalyzing the conjugation of epoxides with glutathione
AUTHOR(S): Boyland, E.; Williams, K.
CORPORATE SOURCE: Chester Beatty Res. Inst., London
SOURCE: Biochemical Journal (1965), 94(1), 190-7
CODEN: BIJOAK; ISSN: 0264-6021
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Liver supernatant prepns. from rats and ferrets catalyzed the conjugation of some epoxides with glutathione. The enzyme involved was called glutathione S-epoxidetransferase, as it was different from glutathione S-aryltransferase, and from the enzyme catalyzing the conjugation of iodomethane and glutathione. The enzyme did not catalyze the reaction with cysteine. It was not inactivated by dialysis but was unstable at pH 5.0. The role of the enzyme in metabolism of foreign compds. was discussed.

AN 1965:31682 HCAPLUS

=> d l28 ibib abs fam rn hitstr 1-2

L28 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:802488 HCAPLUS
DOCUMENT NUMBER: 147:284673
TITLE: A unimolecular nanocapsule: Encapsulation property of amphiphilic polymer based on hyperbranched polythreitol
AUTHOR(S): Kitajyo, Yoshikazu; Nawa, Yumiko; Tamaki, Masaki; Tani, Hirofumi; Takahashi, Kenji; Kaga, Harumi; Satoh, Toshifumi; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Biotechnology and Macromolecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Polymer (2007), 48(16), 4683-4690
CODEN: POLMAG; ISSN: 0032-3861
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

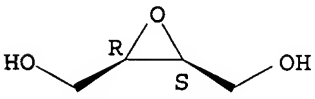
AB Hyperbranched polythreitol with different mol. wts. (Mw,SLS: 1.18+104 and 4.79+104) was reacted with trityl chloride in DMF to afford a novel amphiphilic polymer consisting of polythreitol as the hydrophilic core and the trityl groups as the hydrophobic shell. Amphiphilic polymer was tested for its ability to act as a unimol. nanocapsule toward the water-soluble dye, rose bengal (RB). Their encapsulation and release properties were also evaluated by comparison with the degree of substitution (DS) of the trityl groups, i.e., the hydrophobic shell d. The polymers were found to have very good unimol. nanocapsule characteristics even at extremely low concns. The average number of RBs per polymer mol. depended on the hydrophilic core size and the hydrophobic shell d. The increasing DS value led to a decrease in the encapsulated amount due to the decrease in the hydrophilic core space, while the low DS value (less than .apprx.20 mol%) led to a destabilization as a unimol. nanocapsule and a lower encapsulation ability. In particular, amphiphilic polymer with .apprx.23% DS value showed an efficient encapsulation. Based on a release test of the RB-loaded unimol. nanocapsules, the polymers showed a high RB-holding ability in water.

AN 2007:802488 HCAPLUS
DN 147:284673
RN 756529-94-9DP
RN 11121-48-5
IT 756529-94-9DP, tritylated hyperbranched derivs.
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(encapsulation property of amphiphilic polymer based on hyperbranched polythreitol)
RN 756529-94-9 HCAPLUS
CN 2,3-Oxiranedimethanol, (2R,3S)-rel-, homopolymer (CA INDEX NAME)

CM 1

CRN 57302-79-1
CMF C4 H8 O3

Relative stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:93062 HCAPLUS
DOCUMENT NUMBER: 142:355662
TITLE: Synthesis of Hyperbranched Polytetritol by Ring-Opening Multibranching Polymerizations of 2,3-Anhydroerythritol and 2,3-Anhydro-DL-threitol
AUTHOR(S): Imai, Tomoko; Nawa, Yumiko; Kitajyo, Yoshikazu; Satoh, Toshifumi; Kaga, Harumi; Kaneko, Noriaki; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Macromolecules (2005), 38(5), 1648-1654
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

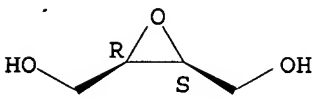
AB 2,3-Anhydroerythritol (1a) and 2,3-anhydro-DL-threitol (1b) were polymerized using boron trifluoride di-Et etherate ($BF_3 \cdot OEt_2$) as a cationic initiator. The polymns. of 1a and 1b proceeded through a ring-opening reaction with a proton-transfer reaction to produce hyperbranched carbohydrate polymers (2a and 2b) consisting of DL-threitol and erythritol units, resp. The degrees of branching (DBs) estimated by the 13C NMR spectra of 2a and 2b were 0.47 and 0.45, resp. The weight-average mol. weight (Mw,SLS) values (2.67 + 105-3.20 + 106) estimated using static light scattering (SLS) of the resulting hyperbranched carbohydrate polymers were significantly higher than the weight-average mol. weight (Mw,SEC) values (1.04 + 103-2.77 + 103) estimated using size exclusion chromatog. (SEC). The viscosities of 2a and 2b in aqueous sodium nitrate ($NaNO_3$) solution were very low, and the intrinsic viscosities ([η]) of 2a and 2b were in the range from 0.0190 to 0.0250 dL g-1. The three-dimensional properties characterized by the SLS and viscosity measurements indicated that 2a and 2b should be spherical mols.

AN 2005:93062 HCAPLUS
DN 142:355662
RN 756529-94-9P
RN 848863-55-8P
RN 109-63-7
RN 14694-95-2
RN 848863-53-6P
RN 848863-54-7P
RN 848863-53-6DP
RN 848863-54-7DP
RN 106-95-6
RN 57302-79-1
RN 848863-52-5P
IT 756529-94-9P 848863-55-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(hyperbranched; synthesis of hyperbranched polythreitol by ring-opening multibranching polymns. of anhydroerythritol and anhydro-DL-threitol)
RN 756529-94-9 HCAPLUS
CN 2,3-Oxiranedimethanol, (2R,3S)-rel-, homopolymer (CA INDEX NAME)

CM 1

CRN 57302-79-1
CMF C4 H8 O3

Relative stereochemistry.

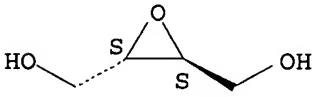


RN 848863-55-8 HCAPLUS
CN 2,3-Oxiranedimethanol, (2R,3R)-rel-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 19953-87-8
CMF C4 H8 O3

Relative stereochemistry.

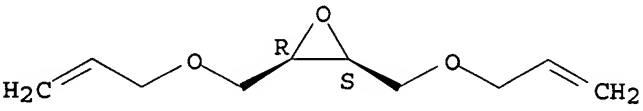


IT 848863-53-6P, 2,3-Anhydro-1,4-di-O-allylerythritol homopolymer
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of hyperbranched polythreitol by ring-opening multibranching polymns. of anhydroerythritol and anhydro-DL-threitol)
RN 848863-53-6 HCAPLUS
CN Oxirane, 2,3-bis[(2-propenyloxy)methyl]-, (2R,3S)-rel-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 848863-52-5
CMF C10 H16 O3

Relative stereochemistry.

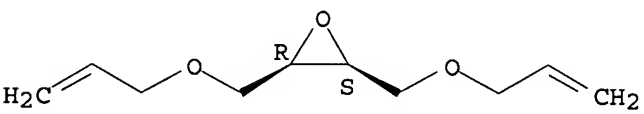


IT 848863-53-6DP, allyl group isomerization product, hydrolyzed
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of hyperbranched polythreitol by ring-opening multibranching polymns. of anhydroerythritol and anhydro-DL-threitol)
RN 848863-53-6 HCAPLUS
CN Oxirane, 2,3-bis[(2-propenyloxy)methyl]-, (2R,3S)-rel-, homopolymer (9CI) (CA INDEX NAME)

CM 1

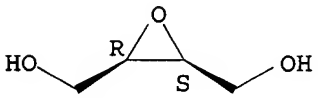
CRN 848863-52-5
CMF C10 H16 O3

Relative stereochemistry.



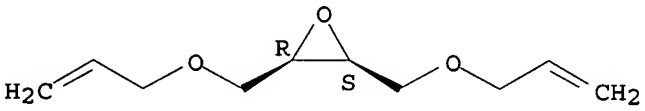
IT 57302-79-1, 2,3-Anhydroerythritol
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of hyperbranched polythreitol by ring-opening multibranching polymns. of anhydroerythritol and anhydro-DL-threitol)
RN 57302-79-1 HCAPLUS
CN 2,3-Oxiranedimethanol, (2R,3S)-rel- (CA INDEX NAME)

Relative stereochemistry.



IT 848863-52-5P, 2,3-Anhydro-1,4-di-O-allylerythritol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of hyperbranched polythreitol by ring-opening multibranching polymns. of anhydroerythritol and anhydro-DL-threitol)
RN 848863-52-5 HCAPLUS
CN Oxirane, 2,3-bis[(2-propenyloxy)methyl]-, (2R,3S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

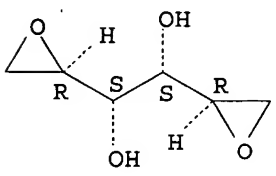
L27 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis of Hyperbranched 2,5-Anhydro-D-glucitol by Proton-Transfer Cyclopolymerization of 1,2:5,6-Dianhydro-D-mannitol

=> d l27 ibib abs fam rn hitstr

L27 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:591563 HCAPLUS
DOCUMENT NUMBER: 139:261604
TITLE: Synthesis of Hyperbranched 2,5-Anhydro-D-glucitol by Proton-Transfer Cyclopolymerization of 1,2:5,6-Dianhydro-D-mannitol
AUTHOR(S): Imai, Tomoko; Satoh, Toshifumi; Kaga, Harumi; Kaneko, Noriaki; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Molecular Chemistry Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Macromolecules (2003), 36(17), 6359-6363
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cyclopolymn. of 1,2:5,6-dianhydro-D-mannitol (1) was carried out using BF3·OEt2 and t-BuOK. Although the anionic polymerization tended to form gels, the cationic polymerization proceeded through the proton-transfer reaction mechanism to produce hyperbranched carbohydrate polymers (2) mainly consisting of 2,5-anhydro-D-glucitol units. The weight-average mol. weight (Mw,SLS) values of 2 measured by static light scattering (SLS) varied in the range of 2.08 + 105-26.9 + 105, which were significantly higher than the weight-average mol. weight (Mw,SEC) values by size exclusion chromatog. (SEC). The degree of branching (DB), estimated by the 13C NMR measurements, was ca. 0.44-0.46. The α value of the Mark-Houwink equation, which was determined by the viscosity measurements, was ca. 0.3. The hyperbranched polymers 2 were nanoscale particle with the radii of gyration (Rg) of 67.4-132.0 nm.
AN 2003:591563 HCAPLUS
DN 139:261604
RN 865-47-4
RN 109-63-7
RN 19895-66-0
RN 603129-00-6P
IT 19895-66-0, 1,2:5,6-Dianhydro-D-mannitol
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(mechanism of polymerization in synthesis of hyperbranched 2,5-anhydro-D-glucitol polymer by proton-transfer polymerization accompanied by ring-opening and ring-closure reaction of 1,2:5,6-dianhydro-D-mannitol and properties of obtained polymers)
RN 19895-66-0 HCAPLUS
CN D-Mannitol, 1,2:5,6-dianhydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 603129-00-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of hyperbranched 2,5-anhydro-D-glucitol polymer by proton-transfer polymerization accompanied by ring-opening and ring-closure reaction of 1,2:5,6-dianhydro-D-mannitol and properties of obtained polymers)

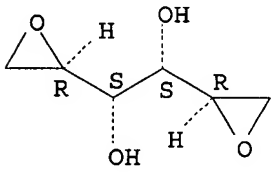
RN 603129-00-6 HCAPLUS

CN D-Mannitol, 1,2:5,6-dianhydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 19895-66-0
CMF C6 H10 O4

Absolute stereochemistry.



L31 ANSWER 1 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1005513 HCAPLUS
TITLE: Synthesis and characterization of methacrylate-type glycopolymers with branched architectures
AUTHOR(S): Muthukrishnan, Sharmila; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: ACS Symposium Series (2006), 944(Controlled/Living Radical Polymerization), 214-233
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We report the synthesis and characterization of glycopolymers of different topologies via atom transfer radical polymerization (ATRP) of a sugar -carrying methacrylate monomer, 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (MAIGlc). Hyperbranched glycopolymers were obtained by self-condensing vinyl copolymn. (SCVCP) of the methacrylic AB* inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEM) with MAIGlc via ATRP, followed by deprotection of the isopropylidene protecting groups. The branched structures were confirmed by 1H NMR, elemental analyses, gel permeation chromatog. (GPC) and GPC using a viscosity detector (GPC/viscosity) measurements. Then the monomer, MAIGlc and the polyinitiator, poly(2-(2-bromoisobutyryloxy)ethyl methacrylate), (PBIEM) were used to obtain glycocylindrical brushes ("mol. sugar sticks") with PMAGlc side chains, using the 'grafting from' approach via ATRP. The efficiency of the initiating sites of the polyinitiator, PBIEM was determined to be in the range of $0.23 < f < 0.38$ by cleaving the side chains from the backbone. Scanning Force Microscopy (SFM) shows that the morphol. of the resulting glycocylindrical brushes is worm-like despite of low grafting efficiency. After deprotection, the water-soluble brushes were investigated using SFM and cryogenic transmission electron microscopy (cryo-TEM) measurements.
AN 2007:1005513 HCAPLUS

=> s l30 and (l20 or l24)
L32 0 L30 AND (L20 OR L24)

=> d l31 ibib abs fam rn hitstr 2-40

L31 ANSWER 2 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:1005512 HCAPLUS
TITLE: Synthesis and characterization of methacrylate-type glycopolymers with branched architectures
AUTHOR(S): Muthukrishnan, Sharmila; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: ACS Symposium Series (2006), 944(Controlled/Living Radical Polymerization), 214-233
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We report the synthesis and characterization of glycopolymers of different topologies via atom transfer radical polymerization (ATRP) of a sugar -carrying methacrylate monomer, 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (MAIGlc). Hyperbranched glycopolymers were obtained by self-condensing vinyl copolymn. (SCVCP) of the methacrylic AB* inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEM) with MAIGlc via ATRP, followed by deprotection of the

isopropylidene protecting groups. The branched structures were confirmed by 1H NMR, elemental analyses, gel permeation chromatog. (GPC) and GPC using a viscosity detector (GPC/viscosity) measurements. Then the monomer, MAIGlc and the polyinitiator, poly(2-(2-bromoisobutyryloxy)ethyl methacrylate), (PBIEM) were used to obtain glycocylindrical brushes ("mol. sugar sticks") with PMAGlc side chains, using the 'grafting from' approach via ATRP. The efficiency of the initiating sites of the polyinitiator, PBIEM was determined to be in the range of $0.23 < f < 0.38$ by cleaving the side chains from the backbone. Scanning Force Microscopy (SFM) shows that the morphol. of the resulting glycocylindrical brushes is worm-like despite of low grafting efficiency. After deprotection, the water-soluble brushes were investigated using SFM and cryogenic transmission electron microscopy (cryo-TEM) measurements.

AN 2007:1005512 HCAPLUS

L31 ANSWER 3 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:953173 HCAPLUS
TITLE: Synthesis of hyperbranched carbohydrate polymers by ring-opening multibranching polymerization of anhydro sugar
AUTHOR(S): Satoh, Toshifumi; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Biotechnology and Macromolecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Macromolecular Bioscience (2007), 7(8), 999-1009
CODEN: MBAIBU; ISSN: 1616-5187
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The synthesis of novel hyperbranched carbohydrate polymers, prepared by the ring-opening multibranching polymns. of anhydro and dianhydro sugars, is described. The hyperbranched carbohydrate polymers were formed by the cationic polymerization of 1,6-anhydro-β-D-hexopyranose, 1,4-anhydrotetritol, 2,3-anhydrotetritol, and 1,2:5,6-dianhydro-D-mannitol. These polymns. proceeded without gelation to produce water-soluble hyperbranched carbohydrate polymers with controlled mol. wts. and narrow polydispersities. The values for the degree of branching of the polymers were in the range of 0.28-0.50. The polymerization method, which proceeds through a ring-opening reaction by a proton-transfer reaction mechanism, is a facile method leading to a spherical carbohydrate polymer with a high degree of branching.
AN 2007:953173 HCAPLUS
REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:542454 HCAPLUS
DOCUMENT NUMBER: 147:10198
TITLE: Synthesis and characteristics of hyperbranched carbohydrate polymer
AUTHOR(S): Satoh, Toshifumi
CORPORATE SOURCE: Creative Res. Initiative "Sousei", Hokkaido University, Japan
SOURCE: Materials Integration (2007), 20(5), 29-34
CODEN: MINTFB; ISSN: 1344-7858
PUBLISHER: Ti, Ai, Shi
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review. The ring-opening cationic polymns. of anhydrosugars (1-5) were carried out to synthesize hyperbranched carbohydrate polymers (poly-1-5). The polymns. proceed through a ring-opening reaction with a proton transfer reaction to produce water-soluble hyper-branched carbohydrate

polymers. The degrees of branching estimated by the NMR or GC-MS measurement were ca. 0.28-0.50. The results of the 13C NMR, the static light scattering, and the viscosity measurements indicated that the resulting carbohydrate polymers were highly branched spherical macromols.
AN 2007:542454 HCAPLUS
DN 147:10198

L31 ANSWER 5 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2007:196974 HCAPLUS
DOCUMENT NUMBER: 146:442104
TITLE: Linear and Hyperbranched Glycopolymer-Functionalized Carbon Nanotubes: Synthesis, Kinetics, and Characterization
AUTHOR(S): Gao, Chao; Muthukrishnan, Sharmila; Li, Wenwen; Yuan, Jiayin; Xu, Youyong; Mueller, Axel H. E.
CORPORATE SOURCE: College of Chemistry and Chemical Engineering, Shanghai Jiao Tong University, Shanghai, 200240, Peop. Rep. China
SOURCE: Macromolecules (Washington, DC, United States) (2007), 40(6), 1803-1815
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Linear and hyperbranched glycopolymers, a kind of sugar -containing polymers, were grown successfully from surfaces of multiwalled carbon nanotubes (MWNTs) by the "grafting from" strategy with good controllability and high reproducibility. Linear glycopolymer was grafted from the surfaces of MWNTs by surface-initiated atom transfer radical polymerization (ATRP) of 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-D-glucofuranose (MAIG) with CuIBr/HMTETA (1,1,4,7,10,10-hexamethyltriethylenetetramine) at 60 °C in Et acetate. After hydrolysis of polyMAIG in 80 weight % formic acid for 48 h, water-soluble poly(3-O-methacryloyl-α,β-D-glucopyranose) (polyMAG)-grafted MWNTs were obtained. The kinetics were investigated by carrying out the polymns. using 2-bromo-2-methylpropionyl-immobilized MWNTs (MWNT-Br) as the macroinitiator in the absence or presence of Et 2-bromoisobutyrate as sacrificial initiator. In both cases a linear dependence of mol. weight on conversion was obtained, and the polymer amts. grafted on MWNTs could be well controlled in a wide range by the reaction time and monomer conversion. Coupling was found in the GPC curves of free polymer when the conversion of monomer reached ca. 45-50%. This clearly indicates that coupling reactions are more predominant than the conventional ATRP in a homogeneous solution without CNTs, where no coupling occurred despite of very high conversion of this monomer (>80%). Hyperbranched glycopolymers (HPGs) were also grafted from the surfaces of MWNTs by self-condensing vinyl copolymn. (SCVCP) of the monomer, MAIG, and inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEMA, AB*) via ATRP with bis(triphenylphosphine)nickel(II) bromide ((PPh3)2NiBr2) at 100 °C in Et acetate. After deprotection in formic acid, hyperbranched glycopolymers with high d. of hydroxyl groups functionalized MWNTs were achieved. The novel water-soluble biocompatible glycopolymer-grafted CNTs have fascinating potentials in the fields of tissue engineering and bionanomaterials.
AN 2007:196974 HCAPLUS
DN 146:442104
RN 851486-69-6P
RN 25101-93-3D
RN 25101-93-3P
RN 7440-44-0
RN 600-00-0
RN 3083-10-1
RN 7787-70-4

RN 14126-37-5
RN 6613-70-3
REFERENCE COUNT: 133 THERE ARE 133 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 6 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:881294 HCAPLUS
DOCUMENT NUMBER: 146:258534
TITLE: Immobilized hyperbranched glycoacrylate films as bioactive supports
AUTHOR(S): Muthukrishnan, Sharmila; Nitschke, Mirko; Gramm, Stefan; Oezyuerek, Zeynep; Voit, Brigitte; Werner, Carsten; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II and Bayreuther Zentrum fuer Kolloide und Grenzflaechen, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: Macromolecular Bioscience (2006), 6(8), 658-666
CODEN: MBAIBU; ISSN: 1616-5187
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors report on the low-pressure plasma immobilization, characterization and application of thin films of hyperbranched glycoacrylates, poly(3-O-acryloyl-α,β-D-glucopyranoside) (AGlc), on PTFE-like fluorocarbon surfaces. This method is an efficient and versatile way to immobilize sugar-carrying branched acrylates as thin films of approx. 5 nm thickness on polymeric substrates while the functional groups and properties of the immobilized mols. are largely retained. The extent of poly(AGlc) degradation during plasma immobilization was investigated using FTIR-ATR spectroscopy and XPS. The thickness and topog. of the immobilized films were characterized using spectroscopic ellipsometry and SFM, resp. Studies of protein adsorption, as well as cell adhesion and proliferation on the poly(AGlc) surfaces, showed that these materials are suitable for the control of biointerfacial phenomena.
AN 2006:881294 HCAPLUS
DN 146:258534
RN 925911-41-7
RN 40690-74-2
RN 188065-73-8
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 7 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:304977 HCAPLUS
DOCUMENT NUMBER: 146:144548
TITLE: Novel synthetic method for preparing artificial carbohydrate polymers
AUTHOR(S): Satoh, Toshifumi; Imai, Tomoko; Kitajyo, Yoshikazu; Kakuchi, Toyoji
CORPORATE SOURCE: Graduate School of Engineering, Hokkaido University, N13W8, Kita-ku, Sapporo, 060-8628, Japan
SOURCE: Current Topics in Polymer Research (2005), 195-231.
Editor(s): Bregg, Robert K. Nova Science Publishers, Inc.: Hauppauge, N. Y.
CODEN: 69HYTR; ISBN: 1-59454-437-9
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review. The regio- and stereoselective cyclopolymn. of dianhydro sugar has been studied as a new synthetic method for preparing an artificial carbohydrate polymer lacking an anomeric linkage, which was quite different from naturally occurring polysaccharides. In addition, the

synthesis of novel hyperbranched carbohydrate polymers, preparing by the ring-opening multibranching polymns. of anhydro and dianhydro sugars, has been described.

AN 2006:304977 HCAPLUS
DN 146:144548
REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 8 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:283682 HCAPLUS
DOCUMENT NUMBER: 144:489002
TITLE: Synthesis and characterization of surface-grafted hyperbranched glycomethacrylates
AUTHOR(S): Muthukrishnan, Sharmila; Erhard, Dominik P.; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II and Bayreuther Zentrum fuer Kolloide und Grenzflaechen, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: Macromolecules (2006), 39(8), 2743-2750
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Hyperbranched glycopolymers were grafted from a silicon wafer with a covalently attached initiator layer of α-bromoester fragments using self-condensing vinyl copolymn. (SCVCP) of the methacrylic AB* inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEM), and a sugar-carrying methacrylate, 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (MAIGlc), via atom transfer radical polymerization (ATRP). The film thickness and characteristic surface morphol. were determined using ellipsometry and scanning force microscopy, resp. The thickness and roughness of the resulting surfaces depend on the catalyst amount and the comonomer ratio, γ = [MAIGlc]0/[BIEM]0. A polymer brush of linear polyMAIGlc was also obtained in the presence of a sacrificial initiator via ATRP. Deprotection of the isopropylidene groups of the branched and linear polymer brushes resulted in hydrophilic surfaces as demonstrated by contact angle measurements. The quant. deprotection was also confirmed by diffuse-reflectance IR spectroscopy. XPS was further used to determine the surface chemical composition before and after deprotection.

AN 2006:283682 HCAPLUS
DN 144:489002
RN 851486-69-6DP
RN 851486-69-6P
RN 7440-21-3D
RN 707471-11-2D
RN 25101-93-3DP
RN 25101-93-3P
RN 14126-37-5P
RN 600-00-0
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 9 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:250463 HCAPLUS
TITLE: Synthesis and characterization of surface-grafted hyperbranched glycomethacrylates
AUTHOR(S): Muller, Axel H. E.; Muthukrishnan, Sharmila; Erhardt, Dominik P.; Mori, Hideharu
CORPORATE SOURCE: Macromolecular Chemistry II, University of Bayreuth, D-95440 Bayreuth, N/A, Germany
SOURCE: Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006),

PMSE-395. American Chemical Society: Washington, D. C.
CODEN: 69HYEC
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English
AB Hyperbranched glycopolymers are grafted from a silicon wafer consisting of a covalently attached initiator layer of α-bromoester fragments by using self-condensing vinyl copolymn. (SCVCP) of the methacrylic AB* inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEM) and a sugar-carrying monomer, 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (MAIGlc) via atom transfer radical polymerization (ATRP). The film thickness and characteristic surface morphol. were determined using ellipsometry and scanning force microscopy (SFM), resp. The thickness and roughness of the resulting surfaces depend on the catalyst amount and the comonomer ratio, γ = [MAIGlc]0/[BIEM]0. Linear polymer brush of MAIGlc was also obtained in the presence of a sacrificial initiator via ATRP. Deprotection of the isopropylidene groups of the branched and linear polymer brushes resulted in hydrophilic surfaces as investigated by contact angle measurements. The quant. deprotection was also confirmed by diffuse-reflectance IR (DRIFT-IR) spectroscopy. XPS was further used to determine the surface chemical composition of the surfaces before and after deprotection.
AN 2006:250463 HCAPLUS

L31 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:243841 HCAPLUS
TITLE: Multivalent sulfated PEO glycodendrimer. A highly potent L-selectin binding antagonist
AUTHOR(S): Rele, Shyam M.; Cui, Wanxing; Chaikof, Elliot L.
CORPORATE SOURCE: Department of Surgery and Bioengineering, Laboratory of Biomedical and Molecular Engineering, Emory University School of Medicine, Atlanta, GA, 30322, USA
SOURCE: Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006 (2006), CARB-093. American Chemical Society: Washington, D. C.
CODEN: 69HYEC
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English
AB Immune surveillance of the human body is predominantly carried out by selectin-induced leukocyte rolling on endothelial surfaces and is an essential step in mediating cellular adhesion thereby initiating the complex cascade of events leading to inflammatory and cell-mediated responses. Motivation exists to develop simpler therapeutic oligosaccharide analogs as specific selectin-binding antagonists, which structurally resemble naturally occurring cell-surface saccharide arrays and exhibit multiple and cooperative receptor binding properties. Incorporating elements capable of recognizing selectins into the critical glycocluster ligand design, we have generated a simultaneous presentation of multiple copies of biorecognizable saccharide epitopes such as sulfated lactose functionalized glycoligands on an appropriate water soluble macromol. scaffold (polyethylene oxide carrier). This has created a polyvalent display of sugar-coated glycodendrimer (SR-12) that amplifies the affinity of glycoside-mediated receptor targeting capable of mimicking the action of physiol. ligands. Since selectin-glcysoligand binding is greatly amplified through multivalent presentation of oligosaccharide determinants, we explored the capacity of our sulfated hyperbranched glycodendrimer SR-12 to limit selectin binding events in vitro (adhesion of U937 lymphoma cells) and inflammatory responses in vivo (mouse peritonitis model). Significantly, the compound SR-12 was found to be a potent L-selectin antagonist and dramatically reduced inflammatory cell recruitment in vivo. The present work highlights our laboratory's contribution to the creation of such engineered

glycomics as a subset of more complex cellular matrix with distinct carbohydrate recognition domains and holds new promise for the development of drug design (antagonists/inhibitors), diagnostic agents and development of novel biomaterials for modulating tissue regeneration and cellular interactions.
AN 2006:243841 HCAPLUS

L31 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:241656 HCAPLUS
DOCUMENT NUMBER: 146:122413
TITLE: Synthesis and characterization of surface-grafted hyperbranched glycomethacrylates
AUTHOR(S): Muthukrishnan, Sharmila; Erhard, Dominik P.; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekular Chemie II, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: PMSE Preprints (2006), 94, 663-664
CODEN: PPMRA9; ISSN: 1550-6703
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB Hyperbranched glycopolymers were grafted from a silicon wafer with a covalently attached initiator layer of α-bromoester fragments using self-condensing vinyl copolymn. (SCVCP) of the methacrylic AB* inimer, 2-(2-bromoisobutyryloxy)ethyl methacrylate (BIEM), and a sugar-carrying methacrylate, 3-O-methacryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (MAIGlc), via atom transfer radical polymerization (ATRP). The film thickness and characteristic surface morphol. were determined using ellipsometry and scanning force microscopy, resp. The thickness and roughness of the resulting surfaces depend on the catalyst amount and the comonomer ratio, γ = [MAIGlc]0/[BIEM]0. A polymer brush of linear polyMAIGlc was also obtained in the presence of a sacrificial initiator via ATRP. Deprotection of the isopropylidene groups of the branched and linear polymer brushes resulted in hydrophilic surfaces as demonstrated by contact angle measurements. The quant. deprotection was also confirmed by diffuse-reflectance IR spectroscopy. XPS was further used to determine the surface chemical composition before and after deprotection.
AN 2006:241656 HCAPLUS
DN 146:122413
RN 25101-93-3DP
RN 25101-93-3P
RN 851486-69-6DP
RN 213453-08-8P
RN 6613-70-3P
RN 600-00-0
RN 707471-11-2
RN 14126-37-5
RN 582-52-5
RN 760-93-0
RN 868-77-9
RN 10025-78-2
RN 20769-85-1
RN 7440-21-3
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:505 HCAPLUS
DOCUMENT NUMBER: 144:254549
TITLE: Synthesis of unimolecular reversed micelle consisting of a poly(L-lactide) shell and hyperbranched D-mannan core

AUTHOR(S): Satoh, Toshifumi; Tamaki, Masaki; Kitajyo, Yoshikazu; Maeda, Takahiro; Ishihara, Hiroyuki; Imai, Tomoko; Kaga, Harumi; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Biotechnology and Macromolecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2005), Volume Date 2006, 44(1), 406-413
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel biodegradable unimol. reversed micelle consisting of a poly(L-lactide) (PLA) shell and a hyperbranched D-mannan (HBM) core, i.e., a chestnut-shaped polymer (PLA-HBM), was synthesized by the polymerization of L-lactide on HBM with 4-(dimethylamino)pyridine (DMAP) as the catalyst. The obtained polymers were soluble in DMSO, THF, and chloroform but insol. in H2O. The mol. wts. of the PLA chain on PLA-HBM tended to increase with increasing polymerization time. The number of PLA chains on PLA-HBM could be controlled by the ratio of DMAP to the sugar unit in HBM. The obtained copolymer, PLA-HBM, acted as a unimol. reversed micelle with an encapsulation ability toward the hydrophilic mol. In addition, the entrapped hydrophilic mols. were slowly released from the core of PLA-HBM, and the release rate was accelerated by the breaking of the PLA chains of the shell when proteinase K as a hydrolase of PLA was used.
AN 2006:505 HCAPLUS
DN 144:254549
RN 477283-59-3
RN 877051-89-3P
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 13 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1131610 HCAPLUS
DOCUMENT NUMBER: 144:36604
TITLE: Preparation and characterization of novel hyperbranched poly(amido amine)s from michael addition polymerizations of trifunctional amines with diacrylamides
AUTHOR(S): Wang, Ding; Liu, Ye; Hong, Chun-Yan; Pan, Cai-Yuan
CORPORATE SOURCE: Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, Anhui, Peop. Rep. China
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2005), 43(21), 5127-5137
CODEN: JPACEC; ISSN: 0887-624X
PUBLISHER: John Wiley & Sons, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Novel hyperbranched poly(amido amine)s containing tertiary amines in the backbones and acryl as terminal groups were synthesized via the Michael addition polymns. of trifunctional amines with twofold molar diacrylamide. The hyperbranched structures of these poly(amido amine)s were verified by 13C NMR (INVGATE). The polymerization mechanisms were clarified by following the polymerization process with NMR method, and the results show that the reactivity of secondary amine formed in situ is much lower than that of the secondary amine in 1-(2-aminoethyl) piperazine (AEPZ) ring and the primary amine. The secondary amine formed in situ was almost kept out of the reaction before the primary and secondary amines in AEPZ were consumed, leading to the formation of the AB2 intermediate, and the further reaction of the AB2 yielded the hyperbranched polymers. The mol. wts. and properties of poly(amindo amine)s obtained were characterized by GPC, DSC, and TGA, resp. Based on the reaction of

active acryl groups in the polymers obtained with glucosamine, hyperbranched polymers containing sugar were formed.

AN 2005:1131610 HCAPLUS
DN 144:36604
RN 853009-68-4P
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:984103 HCAPLUS
DOCUMENT NUMBER: 143:265573
TITLE: Method for the production of hyperbranched polysaccharide fractions
INVENTOR(S): Sommermeyer, Klaus
PATENT ASSIGNEE(S): Supramol Parenteral Colloids G.m.b.H., Germany
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005083103	A1	20050909	WO 2005-EP2057	20050226
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004009783	A1	20050915	DE 2004-102004009783	20040228
AU 2005217091	A1	20050909	AU 2005-217091	20050226
CA 2556114	A1	20050909	CA 2005-2556114	20050226
EP 1718755	A1	20061108	EP 2005-707646	20050226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
JP 2007523655	T	20070823	JP 2007-500176	20050226
MX 2006PA09716	A	20061120	MX 2006-PA9716	20060825
IN 2006DN05120	A	20070803	IN 2006-DN5120	20060905
US 2007202577	A1	20070830	US 2006-590676	20061128
PRIORITY APPLN. INFO.:			DE 2004-102004009783A	20040228
			WO 2005-EP2057 W	20050226

AB The invention relates to a method for producing hyperbranched amylopectin having a mean mol. weight ranging between 2,000 and 29,000 Dalton and an average degree of branching of more than 10 percent and less than 20 percent, said degree of branching being expressed in mole percent of the anhydroglucose units carrying branching points. According to the inventive method, the mol. weight of plant amylopectins or starch rich in amylopectin is reduced to mol. wts. not exceeding 60,000 Dalton by means of α-amylase or acid hydrolysis in a first hydrolysis step, and the mol. weight of the reduced product obtained in the first hydrolysis step is further reduced by means of β-amylase reduction in a second hydrolysis step. The invention further relates to the production of coupling products of the hyperbranched amylopectin with a pharmaceutical agent.

AN 2005:984103 HCAPLUS
DN 143:265573
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005083103	A1	20050909	WO 2005-EP2057	20050226
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
				DE 2004-102004009783A	20040228
	DE 102004009783	A1	20050915	DE 2004-102004009783	20040228
	AU 2005217091	A1	20050909	AU 2005-217091	20050226
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	CA 2556114	A1	20050909	CA 2005-2556114	20050226
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	EP 1718755	A1	20061108	EP 2005-707646	20050226
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	JP 2007523655	T	20070823	JP 2007-500176	20050226
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	MX 2006PA09716	A	20061120	MX 2006-PA9716	20060825
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	IN 2006DN05120	A	20070803	IN 2006-DN5120	20060905
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226
	US 2007202577	A1	20070830	US 2006-590676	20061128
				DE 2004-102004009783A	20040228
				WO 2005-EP2057 W	20050226

RN 50-99-7
RN 9000-90-2
RN 9000-91-3
RN 9005-25-8
RN 9037-22-3
RN 9004-53-9P
RN 7681-55-2
RN 74124-79-1
RN 9037-22-3D
RN 9037-22-3DP
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:742691 HCAPLUS
TITLE: Synthesis and encapsulation-release property of star-shaped polylactide having hyperbranched D-Mannan as a core
AUTHOR(S): Satoh, Toshifumi; Tamaki, Masaki; Kitajyo, Yoshikazu; Imai, Tomoko; Kaga, Harumi; Kakuchi, Toyoji
CORPORATE SOURCE: Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1, 2005

(2005), POLY-749. American Chemical Society: Washington, D. C.
CODEN: 69HFCL
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English
AB The novel amphiphilic star-shaped polylactide having hyperbranched D-mannan as a core (PLA-HBM) was synthesized by the polymerization of L-lactide on hyperbranched D-mannan (HBM) with 4-(dimethylamino)pyridine (DMAP) as a catalyst. The obtained copolymers were white solids which were soluble in DMSO, THF, and chloroform but insol. in H2O. The mol. wts. of PLA chain in PLA-HBM tended to increase with the increasing polymerization time. The number of PLA chain in PLA-HBM could be controlled by the ratio of DMAP to sugar unit in HBM (1;DMAP3;/1;sugar3;). The amphiphilic polymers, PLA-HBM, acted as unimol. micelle with the encapsulation ability toward the hydrophilic mol. In addition, the entrapped hydrophilic mols. were released slowly from the core of PLA-HBM and the release rate was accelerated by breaking the PLA chain of the shell when proteinase K was used. Hence, the unimol. micelle, PLA-HBM, was a good candidate for biodegradable controlled-release systems.
AN 2005:742691 HCAPLUS

L31 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:742601 HCAPLUS
TITLE: Glycopolymers with branched architectures: Sugar balls and sugar sticks
AUTHOR(S): Muller, Axel H. E.; Muthukrishnan, Sharmila; Drechsler, Markus; Mori, Hideharu
CORPORATE SOURCE: Makromolekulare Chemie II, Universitat Bayreuth, Bayreuth, 95440, Germany
SOURCE: Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1, 2005 (2005), POLY-659. American Chemical Society: Washington, D. C.
CODEN: 69HFCL
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English
AB Sugar-carrying methacrylates (glycomethacrylates) were polymerized by Atom Transfer Radical Polymerization (ATRP) to form polymers with hyperbranched, cylinder-brush and star-shaped topologies. Self-condensing vinyl copolymn. was used to synthesize hyperbranched polyglycomethacrylates and the compact structure was demonstrated by SEC with viscosity detection. Cylinder brushes with up to 1500 glycomethacrylate side-chains were formed in a 'grafting from' process using an ATRP polyinitiator based on poly(hydroxyethyl methacrylate) and the structure was confirmed by light scattering, AFM, and cryo-TEM. Stars with ca. 60 arms were formed using an initiator based on functionalized silsesquioxane nanoparticles. They were also characterized using the same techniques.
AN 2005:742601 HCAPLUS

L31 ANSWER 17 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:727762 HCAPLUS
DOCUMENT NUMBER: 144:312648
TITLE: Synthesis and encapsulation-release property of star-shaped polylactide having hyperbranched D-mannan as a core
AUTHOR(S): Satoh, Toshifumi; Tamaki, Masaki; Kitajyo, Yoshikaeu; Imai, Tomoko; Kaga, Harumi; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Biotechnology and Macromolecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2005), 46(2), 1032-1033

CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB The novel amphiphilic star-shaped polylactide having hyperbranched D-mannan as a core (PLA-HBM) was synthesized by the polymerization of L-lactide on hyperbranched D-mannan (HBM) with 4-(dimethylamino)pyridine (DMAP) as a catalyst. The obtained copolymers were white solids soluble in DMSO, THF, and chloroform but insol. in H2O. The mol. wts. of PLA chain in PLA-HBM tended to increase with the increasing polymerization time. The number of PLA chain in PLA-HBM could be controlled by the ratio of DMAP to sugar unit in HBM. The amphiphilic polymers, PLA-HBM, acted as unimol. micelle with the encapsulation ability toward the hydrophilic mol. In addition, the entrapped hydrophilic mols. were released slowly from the core of PLA-HBM and the release rate was accelerated by breaking the PLA chain of the shell when proteinase K was used. Hence, the unimol. micelle, PLA-HBM, was a good candidate for biodegradable controlled-release systems.
AN 2005:727762 HCAPLUS
DN 144:312648
RN 477283-59-3P
RN 11121-48-5
RN 39450-01-6
RN 879496-90-9P
RN 1122-58-3
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 18 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:727339 HCAPLUS
DOCUMENT NUMBER: 144:331813
TITLE: Glycopolymers with branched architectures: Sugar balls and sugar sticks
AUTHOR(S): Muthukrishnan, Sharmila; Drechsler, Markus; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2005), 46(2), 247-248
CODEN: ACPPAY; ISSN: 0032-3934
PUBLISHER: American Chemical Society, Division of Polymer Chemistry
DOCUMENT TYPE: Journal; (computer optical disk)
LANGUAGE: English
AB The authors have demonstrated that both the (PPh3)2NiBr2 and the CuBr/HMTETA catalyst systems can be successfully used for the ATRP of 3-O-(methacryloyl)-1,2 5,6-di-O-isopropylidene-t-D-glucofuranoside, MAIGlc. Copolymn. with 2-(2-bromoisobutyryloxy)ethyl methacrylate, BIEM, resulted in randomly branched poly(MAIGIc)s with relatively high mol. wts. Glycocylindrical brushes and glycopolymer stars could be synthesized successfully. The deprotection of isopropylidene protecting groups resulted in water-soluble brushes with branched architectures. This work substantially broadens and extends the scope of facile and straightforward strategy for generating water-soluble glycopolymers and their precursors by a controlled polymerization techniques.
AN 2005:727339 HCAPLUS
DN 144:331813
RN 851486-69-6P
RN 866529-89-7DP
RN 873192-48-4P
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 19 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:346730 HCAPLUS
DOCUMENT NUMBER: 142:417150
TITLE: Compounds and methods for diagnostic imaging and therapy
INVENTOR(S): Wickstrom, Eric; Thakur, Mathew L.
PATENT ASSIGNEE(S): Thomas Jefferson University, USA
SOURCE: U.S. Pat. Appl. Publ., 32 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005085417	A1	20050421	US 2003-688821	20031016
PRIORITY APPLN. INFO.:			US 2003-688821	20031016

AB Compds. comprising a diagnostic or therapeutic moiety can be retained inside a cell by conjugating the moiety to at least one PNA that is targeted to the transcripts from a gene of interest. The diagnostic or therapeutic moiety is also conjugated to at least one targeting moiety specific for an extracellular receptor or other cell surface mol. The targeting moiety binds to the surface of a cell, and the entire compound is then internalized. Once inside the cell, the PNA portion of the diagnostic or therapeutic compound binds to RNA transcripts in a sequence specific manner. Binding of the PNA to its target RNA transcript retains the compound within the cell. The PNA can be designed to bind to a predetd. nucleic acid sequence from an RNA transcript, for example a mutated or overexpressed sequence that is characteristic of a pathol. state.

AN 2005:346730 HCAPLUS
DN 142:417150
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005085417	A1	20050421	US 2003-688821	20031016
			US 2003-688821	20031016

RN 59-30-3
RN 506-32-1
RN 9061-61-4
RN 24305-27-9
RN 62229-50-9
RN 62996-74-1
RN 67763-96-6
RN 7440-58-6
RN 7429-91-6
RN 7439-89-6
RN 7439-91-0
RN 7439-96-5
RN 7440-47-3
RN 7440-54-2
RN 7440-60-0
RN 7440-64-4
RN 16397-91-4
RN 22541-19-1
RN 22541-21-5
RN 7440-53-1
RN 10098-91-6
RN 13967-65-2
RN 13981-25-4
RN 13981-59-4
RN 14041-44-2

RN 14119-09-6
RN 14133-76-7
RN 14265-75-9
RN 14274-68-1
RN 14378-26-8
RN 14391-11-8
RN 14391-19-6
RN 14391-96-9
RN 14913-49-6
RN 14913-89-4
RN 14998-63-1
RN 15092-94-1
RN 15750-15-9
RN 15755-39-2
RN 15757-14-9
RN 15757-86-5
RN 15765-31-8
RN 15766-00-4
RN 15840-01-4
RN 18830-37-0
RN 60-00-4
RN 67-43-6
RN 5109-69-3
RN 9002-98-6
RN 26913-06-4
RN 56491-86-2
RN 58479-39-3D
RN 60239-18-1
RN 60239-22-7
RN 112193-74-5
RN 114873-37-9
RN 850438-43-6
RN 850438-44-7
RN 850438-45-8
RN 850438-46-9
RN 850438-47-0
RN 850438-48-1
RN 850438-49-2
RN 850438-50-5
RN 850438-51-6
RN 850438-52-7
RN 850438-53-8
RN 850438-54-9
RN 850438-55-0
RN 850438-56-1
RN 850438-57-2
RN 850438-58-3
RN 850438-59-4
RN 850438-60-7
RN 850438-61-8
RN 850438-62-9
RN 850438-63-0
RN 850438-64-1
RN 850438-65-2
RN 850438-66-3
RN 850438-67-4
RN 850438-68-5
RN 850438-69-6
RN 850438-70-9
RN 850438-71-0
RN 850438-72-1
RN 850438-73-2
RN 850438-74-3

RN 850438-75-4
RN 850438-76-5
RN 850438-77-6
RN 850438-78-7
RN 850438-79-8
RN 850438-80-1
RN 850438-81-2
RN 850438-83-4
RN 850438-84-5
RN 850438-85-6
RN 850438-86-7
RN 850438-87-8
RN 850438-88-9
RN 850438-89-0
RN 850438-90-3
RN 850438-91-4
RN 850438-92-5
RN 850438-93-6
RN 637-84-3
RN 321982-79-0
RN 321982-81-4
RN 850415-06-4

L31 ANSWER 20 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:304978 HCAPLUS
DOCUMENT NUMBER: 143:26984
TITLE: Synthesis, Branched Structure, and Solution Property of Hyperbranched D-Glucan and D-Galactan
AUTHOR(S): Satoh, Toshifumi; Imai, Tomoko; Ishihara, Hiroyuki; Maeda, Takahiro; Kitajyo, Yoshikazu; Sakai, Yoko; Kaga, Harumi; Kaneko, Noriaki; Ishii, Fumiaki; Kakuchi, Toyoji
CORPORATE SOURCE: Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan
SOURCE: Macromolecules (2005), 38(10), 4202-4210
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The ring-opening multibranching polymns. of 1,6-anhydro-β-D-glucopyranose (1) and 1,6-anhydro-β-D-galactopyranose (2) have been studied in order to synthesize hyperbranched polysaccharides. The solution polymerization in propylene carbonate and the bulk polymerization of 1 and 2 using a thermally induced cationic initiator proceeded through a ring-opening reaction and a proton transfer reaction to afford highly water-soluble polysaccharides, i.e., poly-1 and poly-2, resp. For the polymers from 1 and 2 with the same polymerization conditions, the Mw,SLS and yield of poly-1 were higher than those of poly-2. Here, poly-1 and poly-2 were characterized as hyperbranched polysaccharides consisting of α- and β-linked D-hexopyranosyl and D-hexofuranosyl repeating units, hyperbranched D-glucan and D-galactan, resp. In addition, poly-1 and poly-2 had ca. 30-40 Mol % nonreducing D-hexopyranosyl and D-hexofuranosyl terminal units, and the degree of branching was ca. 0.38 for poly-1 and 0.44-0.60 for poly-2. The resp. viscosities of poly-1 and poly-2 in aqueous NaNO3(0.2 mol·L-1) solution were very low with the intrinsic viscosity values of 0.023-0.042 dL·g-1. The steady shear flow of poly-1 in aqueous solution exhibited a Newtonian behavior with steady shear viscosities independent of the shear rate, even at high concns. The results indicated that the characteristics of the viscosities were attributed to the spherical structure of the hyperbranched polysaccharide in aqueous solution
AN 2005:304978 HCAPLUS

DN 143:26984
RN 87301-62-0
RN 9012-72-0P
RN 9037-55-2P
RN 26099-49-0P
RN 592507-69-2P
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 21 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1045325 HCAPLUS
DOCUMENT NUMBER: 142:177227
TITLE: Synthesis of Hyperbranched Glycopolymers via Self-Condensing Atom Transfer Radical Copolymerization of a Sugar-Carrying Acrylate
AUTHOR(S): Muthukrishnan, Sharmila; Jutz, Guenter; Andre, Xavier; Mori, Hideharu; Mueller, Axel H. E.
CORPORATE SOURCE: Makromolekulare Chemie II and Bayreuther Zentrum fuer Kolloide und Grenzflaechen, Universitaet Bayreuth, Bayreuth, D-95440, Germany
SOURCE: Macromolecules (2005), 38(1), 9-18
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Hyperbranched glycopolymers were synthesized by self-condensing vinyl copolymn. (SCVCP) of an acrylic AB* inimer, 2-(2-bromopropionyloxy)ethyl acrylate (BPEA), with 3-O-acryloyl-1,2:5,6-di-O-isopropylidene-α-D-glucofuranoside (AIGlc) via atom transfer radical polymerization (ATRP), followed by deprotection of the isopropylidene protecting groups. Homopolymn. of AIGlc with the CuBr/pentamethyldiethylenetriamine (PMDETA) catalyst system in solution resulted in linear poly(AIGlc) having controlled mol. wts. and narrow mol. weight distribution, which were characterized using GPC, GPC/viscosity, and MALDI-TOF mass spectrometry. The catalyst system could be applied for SCVCP to synthesize hyperbranched poly(AIGlc)s, in which the mol. wts., the composition of AIGlc segment, and the branched structures can be adjusted by an appropriate choice of the comonomer ratio, γ. Deprotection of the isopropylidene protecting groups of the branched poly(AIGlc)s resulted in water-soluble glycopolymers with randomly branched architectures.
AN 2004:1045325 HCAPLUS
DN 142:177227
RN 582-52-5
RN 814-68-6
RN 40690-74-2P
RN 600-00-0
RN 3030-47-5
RN 7787-70-4
RN 40921-06-0P
RN 833489-77-3P
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 22 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:778554 HCAPLUS
DOCUMENT NUMBER: 141:279158
TITLE: Dendritic polymer films as protein-rejecting coatings
INVENTOR(S): Haag, Rainer; Siegers, Conrad; Muelhaupt, Rolf
PATENT ASSIGNEE(S): Albert-Ludwigs-Universitaet Freiburg, Germany
SOURCE: Ger. Offen., 7 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10311163	A1	20040923	DE 2003-10311163	20030312

PRIORITY APPLN. INFO.: DE 2003-10311163 20030312

AB The title coatings, which decrease the adhesion of proteins, bacteria, and viruses, are dendritic or hyperbranched polymers (degree of branching 10-100%, preferably 50-100%). Cooling a solution of 3.9 g polyglycerol (number-average mol. weight 2500), 0.32 g dihydrothioctanoic acid, 0.35 g dicyclohexylcarbodiimide, a catalyst (DMAP), and 11.5 mL DMF at 0° for 1 h and stirring for 18 h at room temperature gave a viscous, hyperbranched polymer (I). Glass was coated with a 50-nm Au film and then with a 1M MeOH solution of I, left for 18 h, and tested for protein absorption.

AN 2004:778554 HCAPLUS
DN 141:279158
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 10311163	A1	20040923	DE 2003-10311163	20030312
			DE 2003-10311163	20030312

RN 7440-57-5
RN 25322-68-3D
RN 760174-95-6
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 23 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:306485 HCAPLUS
DOCUMENT NUMBER: 142:38888
TITLE: Enzymatic synthesis of new sugar-based polymers
AUTHOR(S): Uyama, Hiroshi
CORPORATE SOURCE: Department of Materials Chemistry, Graduate School of Engineering, Kyoto University, Japan
SOURCE: Asahi Garasu Zaidan Josei Kenkyu Seika Hokoku (2003) No pp. given
CODEN: AGSHEN; ISSN: 0919-9179
URL: http://www.af-info.or.jp/jpn/subsidy/report2/2003/body/03A-C09-P072.TXT
PUBLISHER: Asahi Garasu Zaidan
DOCUMENT TYPE: Journal; General Review; (online computer file)
LANGUAGE: Japanese

AB A review. This study deals with synthesis of new functional polyesters with use of precise catalysis of enzymes. Candida antarctica lipase catalyzed polymerization of sugar alcs. and divinyl esters, in which alpha and omega positions of sugar alcs. were regioselectively acylated to give sugar-containing polyesters. Hyperbranched polyesters were enzymically synthesized from triols and poly(anhydride)s. The branched degree could be precisely controlled by changing the reaction conditions, leading to the production of high mol. weight polyesters with hyperbranched structure. Crosslinkable polyesters were obtained by the lipase-catalyzed polymerization of glycerol and divinyl esters in the presence of unsatd. fatty acids derived from plant oils. Furthermore, they were converted to epoxy-containing polyesters by lipase catalyst. These polyesters were readily cured by thermal treatment to give biodegradable coatings with high gloss surface.

AN 2004:306485 HCAPLUS
DN 142:38888
RN 9001-62-1

L31 ANSWER 24 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:20972 HCAPLUS
DOCUMENT NUMBER: 140:104138
TITLE: Surface-modified base matrices
INVENTOR(S): Larsson, Anders; Meyer, Ulrika; Stridsberg, Friden Kajsa; Von Heijne, Eva
PATENT ASSIGNEE(S): Amersham Biosciences AB, Swed.; Stridsberg Friden, Kajsa; Von Heijne, Eva
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004003542	A1	20040108	WO 2003-SE1035	20030618
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2488420	A1	20040108	CA 2003-2488420	20030618
AU 2003239047	A1	20040119	AU 2003-239047	20030618
EP 1518114	A1	20050330	EP 2003-733764	20030618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005531767	T	20051020	JP 2004-517443	20030618
US 2005222279	A1	20051006	US 2004-517293	20041207

PRIORITY APPLN. INFO.: SE 2002-2067 A 20020628
WO 2003-SE1035 W 20030618

AB The present invention is a surface-modified base matrix comprised of a porous polymeric base matrix onto which branched hydrophilic polyhydroxy-functional polymers were covalently attached, wherein the polyhydroxy-functional polymers are hyper-branched polymers presenting a degree of branching (DB) of at least .apprx.0.2 and each polymer is tethered to the base matrix at two or more points. The present matrix can for example be a cross-linked carbohydrate material, such as agarose, and the hyperbranched hydrophilic polymer can e.g. be a copolymer of epichlorohydrin and a sugar. The invention also relates to a method of surface-modification of a porous base matrix by activating functional hydroxy groups thereon and contacting the activated matrix with a hydrophilic hyperbranched hydroxy-functional polymer.

AN 2004:20972 HCAPLUS
DN 140:104138
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004003542	A1	20040108	WO 2003-SE1035	20030618
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				

	FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
			SE 2002-2067	A	20020628
CA 2488420	A1	20040108	CA 2003-2488420		20030618
			SE 2002-2067	A	20020628
			WO 2003-SE1035	W	20030618
AU 2003239047	A1	20040119	AU 2003-239047		20030618
			SE 2002-2067	A	20020628
			WO 2003-SE1035	W	20030618
EP 1518114	A1	20050330	EP 2003-733764		20030618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
			SE 2002-2067	A	20020628
			WO 2003-SE1035	W	20030618
JP 2005531767	T	20051020	JP 2004-517443		20030618
			SE 2002-2067	A	20020628
			WO 2003-SE1035	W	20030618
US 2005222279	A1	20051006	US 2004-517293		20041207
			SE 2002-2067	A	20020628
			WO 2003-SE1035	W	20030618

RN 9001-63-2
RN 9001-99-4
RN 865-47-4
RN 50-70-4
RN 50-99-7
RN 57-50-1
RN 69-65-8
RN 87-99-0
RN 106-89-8
RN 106-92-3
RN 556-52-5
RN 3033-77-0
RN 7772-98-7
RN 9012-36-6
RN 72146-89-5
RN 120239-63-6
RN 25722-70-7P
RN 76528-56-8P
RN 264617-86-9P
RN 136109-66-5DP
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 25 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:803312 HCAPLUS
DOCUMENT NUMBER: 140:423865
TITLE: Synthesis of oligo- and polysaccharides using sugar oxazoline derivatives
AUTHOR(S): Kadokawa, Jun-ichi; Shoda, Shin-ichiro
CORPORATE SOURCE: Graduate School of Engineering, Tohoku University, Japan
SOURCE: Cellulose Communications (2003), 10(3), 106-113
CODEN: CCOMFD; ISSN: 1342-730X
PUBLISHER: Serurosu Gakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review. This article describes synthesis of glucosamine-containing oligo- and polysaccharides with well-defined structures using sugar (N-acetylglucosamine, N-acetyllactosamine, and N,N'-dacetylchitobiose) oxazoline derivs. Polymerization of sugar oxazoline monomers having a hydroxy group at C-4 or C-6 proceeded through stereoregular glycosylation by using an acid catalyst to produce natural or non-natural aminopolysaccharide. This polymerization was applied to formation of

hyperbranched aminopolysaccharides using sugar oxazoline monomers containing two hydroxy groups. Enzyme-catalyzed polyaddn. of a sugar oxazoline derived from N,N'-dacetylchitobiose also took place, giving rise to an artificial chitin. From non-polymerizable sugar oxazoline substrates, various functionalized oligosaccharides were prepared by the enzymic glycosylation.
AN 2003:803312 HCAPLUS
DN 140:423865
RN 1398-61-4P

L31 ANSWER 26 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:406877 HCAPLUS
DOCUMENT NUMBER: 139:130282
TITLE: Glycodendritic structures based on Boltorn hyperbranched polymers and their interactions with Lens culinaris lectin
AUTHOR(S): Arce, Eva; Nieto, Pedro M.; Diaz, Vicente; Castro, Rossana Garcia; Bernad, Antonio; Rojo, Javier
CORPORATE SOURCE: Grupo de Carbohidratos, Instituto de Investigaciones Quimicas, CSIC, Seville, E-41092, Spain
SOURCE: Bioconjugate Chemistry (2003), 14(4), 817-823
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Multivalent scaffolds bearing carbohydrates have been prepared to mediate biol. processes where carbohydrates are involved. These systems consist of dendritic structures based on Boltorn H20 and H30 hyperbranched polymers to which carbohydrates are linked through a convenient spacer. Mannose has been chosen as a sugar unit to test the viability of this strategy. These glycodendritic compds. have been prepared in a few steps with good yields, showing a high solubility in physiol. media and low toxicity. The binding of these dendritic polymers to the mannose-binding lectin Lens culinaris (LCA) was studied using STD-NMR expts. and quant. precipitation assays. The results demonstrate the existence of a clear interaction between the mannose derivative systems and the Lens lectin where the dendritic scaffold does not have an important role in mannose binding but supplies the necessary multivalence for lectin cluster formation. These glycodendritic structures are able to interact with a receptor, and therefore they can be considered as promising tools for biol. studies.
AN 2003:406877 HCAPLUS
DN 139:130282
RN 86651-32-3P
RN 140428-83-7P
RN 140428-88-2P
RN 565453-82-9P
RN 565453-83-0P
RN 565453-84-1P
RN 4163-65-9
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 27 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:242199 HCAPLUS
DOCUMENT NUMBER: 138:273070
TITLE: Treating surfaces to enhance bio-compatibility
INVENTOR(S): Al-Lamee, Kadem Gayed; Lott, Martyn Peter; Cook, Diane; Bayes, Stuart
PATENT ASSIGNEE(S): Polybiomed Limited, UK
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2003024500	A1	20030327	WO 2002-GB4227		20020917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2460631	A1	20030327	CA 2002-2460631		20020917
AU 2002329402	A1	20030401	AU 2002-329402		20020917
AU 2002329402	B2	20070426			
EP 1427458	A1	20040616	EP 2002-765028		20020917
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK					
JP 2005510266	T	20050421	JP 2003-528594		20020917
ZA 2004001905	A	20050622	ZA 2004-1905		20040309
US 2004241325	A1	20041202	US 2004-489767		20040317
IN 2004DN00830	A	20060804	IN 2004-DN830		20040331
PRIORITY APPLN. INFO.:			GB 2001-22393	A	20010917
			WO 2002-GB4227	W	20020917

OTHER SOURCE(S): MARPAT 138:273070

AB A metal, glass or ceramics article, for example a stent, having at its surface oxide or hydroxide is treated to enhance the biocompatibility and/or phys. characteristics of the surface. The surface is degreased and primed by contact with an alkoxysilane in a aprotic organic solvent in the presence of an acid catalyst so that the alkoxysilance mols. react with the oxide or hydroxide of the surface to form covalent bonds, the alkoxysilane further comprising one or more amino, hydroxyl, carboxylic acid or acid anhydride groups. A polymer, e.g. CM-cellulose, is then covalently coupled to the surface via the amino, hydroxyl, carboxylic acid or acid anhydride groups, after which biol. active materials may be coupled to the polymer. Such materials may include an anti-coagulating agent or anti-platelet agent and an agent that inhibits smooth cell proliferation and restenosis.

AN 2003:242199 HCAPLUS
DN 138:273070
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI WO 2003024500	A1	20030327	WO 2002-GB4227		20020917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
			GB 2001-22393	A	20010917
CA 2460631	A1	20030327	CA 2002-2460631		20020917
			GB 2001-22393	A	20010917
			WO 2002-GB4227	W	20020917

AU 2002329402	A1	20030401	AU 2002-329402	20020917
AU 2002329402	B2	20070426		
			GB 2001-22393	A 20010917
			WO 2002-GB4227	W 20020917
EP 1427458	A1	20040616	EP 2002-765028	20020917
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
			GB 2001-22393	A 20010917
			WO 2002-GB4227	W 20020917
JP 2005510266	T	20050421	JP 2003-528594	20020917
			GB 2001-22393	A 20010917
			WO 2002-GB4227	W 20020917
ZA 2004001905	A	20050622	ZA 2004-1905	20040309
			GB 2001-22393	A 20010917
US 2004241325	A1	20041202	US 2004-489767	20040317
			GB 2001-22393	A 20010917
			WO 2002-GB4227	W 20020917
IN 2004DN00830	A	20060804	IN 2004-DN830	20040331
			GB 2001-22393	A 20010917
			WO 2002-GB4227	W 20020917

RN 1760-24-3
RN 12597-68-1
RN 9002-89-5
RN 9003-01-4
RN 9003-04-7
RN 9004-32-4
RN 9005-49-6
RN 33069-62-4
RN 17372-87-1
RN 65271-80-9
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 28 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:70790 HCAPLUS
DOCUMENT NUMBER: 138:272060
TITLE: Enzyme-catalyzed synthesis of well-defined macromers built around a sugar core
AUTHOR(S): Kumar, Rajesh; Gross, Richard A.
CORPORATE SOURCE: NSF Center for Biocatalysis and Bioprocessing of Macromolecules, Department of Chemistry and Chemical Engineering, Polytechnic University, Brooklyn, NY, 11201, USA
SOURCE: ACS Symposium Series (2003), 840(Biocatalysis in Polymer Science), 107-118
CODEN: ACSMC8; ISSN: 0097-6156
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB By using 4-C-hydroxymethyl-α-D-pentofuranose as the sugar core and lipase-catalyzed transformations, a macromer was constructed with exceptional control of substituent placement around the carbohydrate core in five steps. First, selective lipase-catalyzed acrylation along with prochiral selection of 4-C-hydroxymethyl-1,2-O-isopropylidene-α-D-pentofuranose (diastereomeric excess up to 93%). Second, the ring-opening of ε-caprolactone, ε-CL, from the remaining primary hydroxyl group to give an acryloyl-sugar capped macromer (Mn 11, 300, Mw/Mn 1.36, initiator efficiency 50-55%, < 5% water initiated PCL chains). Third, selective lipase-catalyzed esterification of the terminal hydroxyl of oligo(ε-CL) chains. Fourth, hydrolysis of the 1,2-O-isopropylidene group at the sugar core. Fifth, homopolymn. of the corresponding macromer. The method is flexible and can be used to generate a wide array of unusual macromers and heteroarm stars.

In the absence of biocatalytic transformations, such structural control would be extremely difficult or currently impossible to obtain.

AN 2003:70790 HCAPLUS
DN 138:272060
RN 9001-62-1
RN 407611-64-7P
RN 502-44-3
RN 4245-37-8
RN 55797-64-3
RN 407611-65-8P
RN 407611-66-9P
RN 409304-68-3P
RN 409304-69-4P
RN 407611-67-0P
RN 503415-97-2P
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 29 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:22733 HCAPLUS
DOCUMENT NUMBER: 138:79073
TITLE: Method of preparing nanoparticle coated crystals by copptg. the nanoparticles and the crystal forming material using non-solvents
INVENTOR(S): Moore, Barry douglas; Cunningham, Douglas Burns
PATENT ASSIGNEE(S): University of Strathclyde, UK
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003002225	A1	20030109	WO 2002-GB3024	20020701
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002319404	A1	20030303	AU 2002-319404	20020701
EP 1401551	A1	20040331	EP 2002-748989	20020701
EP 1401551	B1	20060621		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, BG, CZ, EE				
US 2004219221	A1	20041104	US 2004-481941	20040614

PRIORITY APPLN. INFO.: GB 2001-16074 A 20010629
WO 2002-GB3024 W 20020701

AB This invention relates to a method of preparing nanoparticle coated crystals comprising the steps of providing a mixture comprising nanoparticles and a solution of a crystal forming material; and copptg. the nanoparticles and the crystal forming material such that crystals are formed, a surface or surfaces of which are at least partially coated with nanoparticles. The invention also relates to nanoparticle coated crystals, a surface or surfaces of which are at least partially coated with nanoparticles wherein the crystal and nanoparticle coating are formed in a single self-assembly step.

AN 2003:22733 HCAPLUS
DN 138:79073
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI	WO 2003002225	A1	20030109	WO 2002-GB3024		20020701
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW					
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
				GB 2001-16074	A	20010629
	AU 2002319404	A1	20030303	AU 2002-319404		20020701
				GB 2001-16074	A	20010629
				WO 2002-GB3024	W	20020701
	EP 1401551	A1	20040331	EP 2002-748989		20020701
	EP 1401551	B1	20060621			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, BG, CZ, EE					
				GB 2001-16074	A	20010629
				WO 2002-GB3024	W	20020701
	US 2004219221	A1	20041104	US 2004-481941		20040614
				GB 2001-16074	A	20010629
				WO 2002-GB3024	W	20020701

RN 7440-05-3
RN 7440-06-4
RN 7440-17-7
RN 7440-22-4
RN 7440-48-4
RN 7440-57-5
RN 163442-67-9
RN 202009-66-3
RN 63-42-3
RN 142-47-2
RN 516-06-3
RN 1953-02-2
RN 7447-40-7
RN 7488-54-2
RN 7778-80-5
RN 7791-03-9
RN 64-17-5
RN 64-19-7
RN 67-63-0
RN 67-64-1
RN 68-12-2
RN 71-23-8
RN 75-05-8
RN 108-88-3
RN 109-99-9
RN 110-54-3
RN 110-86-1
RN 141-78-6
RN 1310-73-2
RN 7647-01-0
RN 13762-51-1
RN 124-38-9
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 30 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:777032 HCAPLUS
TITLE: Synthesis of hyperbranched polysaccharide by thermally-induced cationic polymerization of 1,6-anhydro sugar
AUTHOR(S): Satoh, Toshifumi; Ishihara, Hiroyuki; Maeda, Takahiro; Kaga, Harumi; Kakuchi, Toyoji
CORPORATE SOURCE: Graduate School of Engineering, Hokkaido University, Sapporo 060-8628, Japan
SOURCE: Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), POLY-013. American Chemical Society: Washington, D. C.
CODEN: 69CZPZ
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB The thermally induced cationic polymerization of 1,6-anhydro-beta-D-mannopyranose (1) and 1,6-anhydro-beta-D-glucopyranose (2) were carried out using 2-butenyl-tetramethylenesulfonium hexafluoroantimonate (3) to produce a hyperbranched polysaccharide. For the polymerization using propylene carbonate as a solvent, the yields and the weight-average mol. wts. (Mw,SLS) of the polysaccharide gradually increased with the increasing monomer concentration When the [1]/[3] molar ratio of 700 were used for 40 min at 150 degree C, the Mw,SLS of the resulting polysaccharide was 10,500, corresponding to the d.p. of ca. 65. The polydispersities of the resulting polysaccharides were relatively narrow with a value in the range of 1.22 to 1.43. For the measurements of the mol. weight, the Mw,SLS was greater than the Mw,SLS, indicating that the polysaccharide is highly branched spherical mols., i.e., hyperbranched polysaccharide. Therefore, the polymerization is a useful method for preparing a hyperbranched polysaccharide with a narrow polydispersity.
AN 2002:777032 HCAPLUS

L31 ANSWER 31 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:248813 HCAPLUS
DOCUMENT NUMBER: 137:47360
TITLE: Molecular dynamics simulations of glycoclusters and glycodendrimers
AUTHOR(S): Von der Lieth, Claus-W.; Frank, Martin; Lindhorst, Thisbe K.
CORPORATE SOURCE: Deutsches Krebsforschungszentrum, Zentrale Spektroskopie (R0400), Heidelberg, D-69120, Germany
SOURCE: Reviews in Molecular Biotechnology (2002), 90(3-4), 311-337
CODEN: RMBIFZ; ISSN: 1389-0352
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with many refs. on glycoclusters and glycodendrimers, compds. which have been designed to serve as high-affinity ligands of receptor proteins to mimic the complex multi-branched oligosaccharides found in glycoconjugates, which form the structural basis of multivalent carbohydrate-protein interactions. Here, a detailed geometric and conformational anal. of fifteen glycodendrimers and glycoclusters has been accomplished, which differ with regard to their core moieties, spacer characteristics and the type of terminal carbohydrate units. To allow a rational design of glycodendrimer-type mols. with regard to the receptor structures involved in carbohydrate recognition, a deeper knowledge of the dynamics of such mols. is desirable. Most glycodendrimers have to be considered highly flexible mols. with their conformational preferences most difficult to elucidate by exptl. methods. Longtime mol. dynamics (MD) simulations with inclusion of explicit solvent mols. are suited to

explore the conformational space accessible to glycodendrimers. It is shown that the accessible conformational space depends strongly on the structural features of the core and spacer moieties and even on the type of terminating sugars. The obtained knowledge about possible spatial distributions of the sugar epitopes exposed on the investigated hyperbranched neoglycoconjugates is detailed for all examples and forms important information for the interpretation and prediction of affinity data, which can be deduced from biol. testing of these multivalent neoglycoconjugates.

AN 2002:248813 HCAPLUS
DN 137:47360
REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 32 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:895576 HCAPLUS
DOCUMENT NUMBER: 136:25110
TITLE: Hyperbranched polymeric micelles for encapsulation and delivery of hydrophobic molecules
INVENTOR(S): Uhrich, Kathryn E.
PATENT ASSIGNEE(S): Rutgers University, USA
SOURCE: U.S., 11 pp., Cont.-in-part of U.S. Ser. No. 298,729.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6328988	B1	20011211	US 1999-422295	19991021
US 6365146	B1	20020402	US 1999-298729	19990423
CA 2370952	A1	20001102	CA 2000-2370952	20000418
WO 2000065024	A2	20001102	WO 2000-US10500	20000418
WO 2000065024	A3	20010208		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1176983	A2	20020206	EP 2000-923508	20000418
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 782787	B2	20050825	AU 2000-43621	20000418
US 2002035217	A1	20020321	US 2001-974218	20011009
US 6497895	B2	20021224		
MX 2001PA10752	A	20020820	MX 2001-PA10752	20011023
US 2003170202	A1	20030911	US 2002-323699	20021218
US 2005089504	A1	20050428	US 2004-920026	20040817

PRIORITY APPLN. INFO.:

US 1999-298729	A2	19990423
US 1999-422295	A	19991021
WO 2000-US10500	W	20000418
US 2001-974218	A1	20011009
US 2002-323699	B1	20021218

AB Polymeric micelles for encapsulation of hydrophobic mols. are provided. Methods and formulations for delivering hydrophobic mols. to a host via these micelles are also provided. Methods of stabilizing liposomes or lipid based formulations by addition of polymeric micelles are also provided. Mucic acid hexyl ester core polymer with PEG 5000 branches was prepared as a white solid having a Tm of 61° and a Mw of 17,800 Daltons (yield =

17%). The amount of lidocaine mol that can be entrapped within the polymeric micelles (the encapsulation number) was 1.0. The in vitro degradation of polymeric mycells was studied.

AN 2001:895576 HCAPLUS
DN 136:25110
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6328988	B1	20011211	US 1999-422295	19991021
				US 1999-298729 A2	19990423
	US 6365146	B1	20020402	US 1999-298729	19990423
	CA 2370952	A1	20001102	CA 2000-2370952	20000418
				US 1999-298729 A	19990423
				US 1999-422295 A	19991021
				WO 2000-US10500 W	20000418
	WO 2000065024	A2	20001102	WO 2000-US10500	20000418
	WO 2000065024	A3	20010208		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
				US 1999-298729 A	19990423
				US 1999-422295 A	19991021
	EP 1176983	A2	20020206	EP 2000-923508	20000418
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
				US 1999-298729 A	19990423
				US 1999-422295 A	19991021
				WO 2000-US10500 W	20000418
	AU 782787	B2	20050825	AU 2000-43621	20000418
				US 1999-298729 A	19990423
				US 1999-422295 A	19991021
				WO 2000-US10500 W	20000418
	US 2002035217	A1	20020321	US 2001-974218	20011009
	US 6497895	B2	20021224		
				US 1999-298729 A2	19990423
				US 1999-422295 A3	19991021
	MX 2001PA10752	A	20020820	MX 2001-PA10752	20011023
				US 1999-298729 A	19990423
				US 1999-422295 A	19991021
				WO 2000-US10500 W	20000418
	US 2003170202	A1	20030911	US 2002-323699	20021218
				US 1999-298729 A2	19990423
				US 1999-422295 A3	19991021
				US 2001-974218 A1	20011009
	US 2005089504	A1	20050428	US 2004-920026	20040817
				US 1999-298729 A2	19990423
				US 1999-422295 A3	19991021
				US 2001-974218 A1	20011009
				US 2002-323699 B1	20021218

PATENT FAMILY INFORMATION:
FAN 2000:772730

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000065024	A2	20001102	WO 2000-US10500	20000418
	WO 2000065024	A3	20010208		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,				

MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

			US 1999-298729	A	19990423
			US 1999-422295	A	19991021
US 6365146	B1	20020402	US 1999-298729		19990423
US 6328988	B1	20011211	US 1999-422295		19991021
			US 1999-298729	A2	19990423
CA 2370952	A1	20001102	CA 2000-2370952		20000418
			US 1999-298729	A	19990423
			US 1999-422295	A	19991021
			WO 2000-US10500	W	20000418
EP 1176983	A2	20020206	EP 2000-923508		20000418
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
			US 1999-298729	A	19990423
			US 1999-422295	A	19991021
			WO 2000-US10500	W	20000418
AU 782787	B2	20050825	AU 2000-43621		20000418
			US 1999-298729	A	19990423
			US 1999-422295	A	19991021
			WO 2000-US10500	W	20000418
MX 2001PA10752	A	20020820	MX 2001-PA10752		20011023
			US 1999-298729	A	19990423
			US 1999-422295	A	19991021
			WO 2000-US10500	W	20000418

RN 79-03-8
RN 112-52-7
RN 142-61-0
RN 526-99-8
RN 27955-94-8DP
RN 70954-90-4P
RN 148355-89-9P
RN 148355-91-3P
RN 25322-68-3DP
RN 25322-68-3DP
RN 74654-07-2DP
RN 56-53-1D
RN 80-05-7D
RN 87-66-1D
RN 108-46-3D
RN 120-80-9D
RN 123-31-9D
RN 137-58-6
RN 500-66-3D
RN 533-73-3D
RN 577-33-3D
RN 602-09-5D
RN 1079-21-6D
RN 1143-38-0D
RN 1333-16-0D
RN 3236-71-3D
RN 6153-39-5D
RN 9004-53-9D
RN 12619-70-4D
RN 26983-52-8D
RN 28346-70-5D
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 33 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:752448 HCAPLUS
DOCUMENT NUMBER: 136:99649
TITLE: Novel hyperbranched glycomimetics recognized by the human mannose receptor: quinic or shikimic acid derivatives as mannose bioisosteres
AUTHOR(S): Grandjean, Cyrille; Angyalosi, Gerhild; Loing, Estelle; Adriaenssens, Eric; Melnyk, Oleg; Pancre, Veronique; Auriault, Claude; Gras-Masse, Helene
CORPORATE SOURCE: Lab. de Synthese, Structure et Fonction des Biomolecules UMR 8525, Inst. de Biologie/Inst. Pasteur de Lille et CNRS, Lille, 59021, Fr.
SOURCE: ChemBioChem (2001), 2(10), 747-757
CODEN: CBCHFX; ISSN: 1439-4227
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The mannose receptor mediates the internalization of a wide range of mols. or microorganisms in a pattern recognition manner. Therefore, it represents an attractive entry for specific drug, gene, or antigen delivery to macrophages and dendritic cells. In an attempt to design novel effective synthetic mannose receptor ligands, quinic and shikimic acid were selected as putative mannose mimics on the basis of X-ray crystallog. data from the related rat mannose-binding lectin. As the mannose receptor preferentially binds to mols. displaying several sugar residues, fluorescein-labeled cluster quinic and shikimic acid derivs. with valencies of two to eight were synthesized. Their mannose receptor mediated uptake was assayed on monocyte-derived human dendritic cells by cytofluorimetric anal. Mannose-receptor specificity was further assessed by competitive inhibition assays with mannan, by confocal microscopy anal., and by expression of the mannose receptor in transfected Cos-1 cells. Constructs derived from both quinic and shikimic acid were efficiently recognized by the mannose receptor with an optimum affinity for the mols. with a valency of four. As a result, com. available quinic and shikimic acids appear as stable mannose bioisosteres, which should prove valuable tools for specific cell delivery.
AN 2001:752448 HCAPLUS
DN 136:99649
RN 40983-58-2
RN 191916-39-9
RN 250358-69-1
RN 389117-86-6P
RN 389117-87-7P
RN 389117-88-8P
RN 389117-89-9P
RN 389117-90-2P
RN 389117-91-3P
RN 389117-92-4P
RN 389132-43-8P
RN 389132-50-7P
RN 256370-81-7
RN 389117-84-4
RN 389117-93-5
RN 998-40-3
RN 250358-45-3
RN 250358-50-0
RN 250358-58-8
RN 324737-81-7
RN 389117-85-5
RN 389117-95-7
RN 389117-96-8
REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 34 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:336204 HCAPLUS
DOCUMENT NUMBER: 135:46357
TITLE: Synthesis of linear and hyperbranched stereoregular aminopolysaccharides by oxazoline glycosylation
AUTHOR(S): Kadokawa, Jun-Ichi; Tagaya, Hideyuki; Chiba, Koji
CORPORATE SOURCE: Department of Materials Science & Engineering, Faculty of Engineering, Yamagata University, Yonezawa, 992-8510, Japan
SOURCE: Polymeric Drugs & Drug Delivery Systems (2001), 251-264. Editor(s): Ottenbrite, Raphael M.; Kim, Sung Wan. Technomic Publishing Co., Inc.: Lancaster, Pa. CODEN: 69BHGZ
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 16 refs. on the synthesis of linear and hyperbranched stereoregular aminopolysaccharides by the oxazoline glycosylation of sugar oxazoline monomers having hydroxy groups.
AN 2001:336204 HCAPLUS
DN 135:46357
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 35 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:149289 HCAPLUS
DOCUMENT NUMBER: 134:193760
TITLE: New synthetic approaches to hyperbranched polymers
AUTHOR(S): Kadokawa, Junichi
CORPORATE SOURCE: Fac. Eng., Yamagata Univ., Yonezawa, 992-8510, Japan
SOURCE: Kagaku to Kogyo (Tokyo) (2001), 54(2), 168-171 CODEN: KAKTAF; ISSN: 0022-7684
PUBLISHER: Nippon Kagakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 14 refs. on preparation of hyperbranched polysaccharides by glycosylation using a sugar oxazoline derivative and preparation of hyperbranched polymers by H+-transfer polymerization of acrylates having OH groups in the presence of PPh3.
AN 2001:149289 HCAPLUS
DN 134:193760

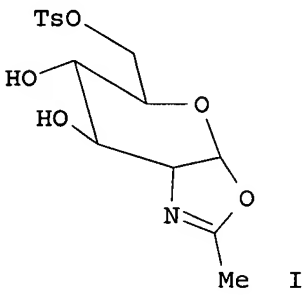
L31 ANSWER 36 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:798526 HCAPLUS
TITLE: Enantio- and regio-selective polymerization with lipase catalysis to polyesters.
AUTHOR(S): Kobayashi, Shiro; Uyama, Hiroshi
CORPORATE SOURCE: Graduate School of Engineering, Kyoto University, Kyoto, 606-8501, Japan
SOURCE: Abstracts of Papers, 220th ACS National Meeting, Washington, DC, United States, August 20-24, 2000 (2000) POLY-424 CODEN: 69FZC3
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal; Meeting Abstract
LANGUAGE: English
AB By utilizing characteristic properties of lipase catalysis, we have achieved enantio- and regioselective polymns. to functional polyesters. In the lipase-catalyzed copolymn. of racemic 3-butanolide (four-membered lactone) with 12-dodecanolide, (S)-3-butanolide was preferentially reacted to give the (S)-enriched optically active copolymer. Furthermore, 5-hexanolide (six-membered lactone) was also enantioselectively copolymd.

by the lipase catalyst. The highest ee value (76 %) was achieved by the copolymn. of 5-hexanolide and 12-dodecanolide in diisopropyl ether. Lipase catalysis induced the regioselective polymerization of glycerol with divinyl sebacate to give a linear polyester consisting of exclusively 1,3-glyceride unit. The polymerization of sugar alcs. such as sorbitol and mannitol with divinyl sebacate produced sugar-containing polyesters, in which 1- and 6-positions of sugar alc. were regioselectively acylated. Enzymic synthesis of hyperbranched polyesters was achieved from the combination of glycerol and poly(azelaic anhydride) and the microstructure could be controlled by changing the feed ratio of the monomers.

AN 2000:798526 HCAPLUS

L31 ANSWER 37 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:336802 HCAPLUS
DOCUMENT NUMBER: 133:135517
TITLE: Architecture of polysaccharides with specific structures: synthesis of hyperbranched polysaccharides
AUTHOR(S): Kadokawa, Jun-Ichi; Tagaya, Hideyuki
CORPORATE SOURCE: Department of Materials Science & Engineering, Faculty of Engineering, Yamagata University, Yonezawa, 992-8510, Japan
SOURCE: Polymers for Advanced Technologies (2000), 11(3), 122-126
CODEN: PADTE5; ISSN: 1042-7147
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB An oxazoline sugar monomer I having two hydroxy groups was employed as an AB2 type monomer for the synthesis of a hyperbranched amino-polysaccharide. The polymerization of I was carried out in the presence of an acid catalyst. The unit structure of product polysaccharide was determined to be β-glucopyranan. The degree of branching was estimated by calcn. of the content of the terminal units in the total units after the reaction of the polymerization product with 1,3-dichloro-1,1,3,3-tetraisopropyldisiloxane. The mol. weight determined by the light-scattering method was higher than that estimated by gel permeation chromatog.

AN 2000:336802 HCAPLUS
DN 133:135517
RN 69304-37-6
RN 213913-71-4
RN 215253-34-2DP
RN 215253-34-2P
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 38 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:542432 HCAPLUS
TITLE: Synthesis of multivalent carbohydrate architectures with inter-saccharide carbamate linkages.
AUTHOR(S): Chong, Pek Y.; Petillo, Peter A.
CORPORATE SOURCE: Department of Chemistry, University of Illinois at Urbana-Champaign, Urbana, IL, 61801, USA
SOURCE: Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), ORGN-053. American Chemical Society: Washington, D. C.
CODEN: 67ZJA5
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Multivalent carbohydrate architectures that incorporate saccharides as key branching units are potential mimics of complex polysaccharides. These compds. may possess properties with potential applications in biol. materials. Their saccharide multivalency may also allow them to act as mimics of cell surface carbohydrates that bind to and act as drug inhibitors of pathogenic agents. In our investigation of the use of carbamates as inter-saccharide linkages, the saccharide-bound -nitrophenyl carbamate has demonstrated utility as an activated precursor for the construction of inter-saccharide linkages. We utilized this approach in a hyperbranched polymerization of AB saccharide units to form multivalent carbohydrate architectures. Our design allows the saccharide densities of these structures to be controlled by altering the intersaccharide linker length.
AN 1999:542432 HCAPLUS

L31 ANSWER 39 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:528123 HCAPLUS
TITLE: Synthesis of linear and hyperbranched stereoregular aminopolysaccharides by oxazoline glycosylation.
AUTHOR(S): Kadokawa, J.; Tagaya, H.; Chiba, K.
CORPORATE SOURCE: Faculty Engineering, Yamagata University, Yamagata, 992-0038, Japan
SOURCE: Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), POLY-412. American Chemical Society: Washington, D. C.
CODEN: 66KYA2
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB This presentation reports the acid-catalyzed polymerization of sugar oxazoline monomers via stereoregular glycosylation to give linear and hyperbranched aminopolysaccharides having a well-defined structure. Sugar oxazoline derivs. having a hydroxy group at position 4 or position 6 polymerized by an acid catalyst such as 10-camphorsulfonic acid giving rise to natural-or non-natural-type aminopolysaccharides, resp. The structures of the product polysaccharides were stereoregular glucopyranan. This polymerization reaction via oxazoline glycosylation could be extended to the synthesis of hyperbranched aminopolysaccharide. A sugar oxazoline monomer having two hydroxy groups was employed for the synthesis of a hyperbranched aminopolysaccharide.
AN 1998:528123 HCAPLUS

L31 ANSWER 40 OF 40 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:140448 HCAPLUS
TITLE: Novel hyperbranched polymeric micelles as controlled drug delivery systems
AUTHOR(S): Jiang, S. Anna; Liu, Hongbo; Guo, Jian; Joshi, Niraj; Uhrich, Kathryn E.

1076817426/10/2007

CORPORATE SOURCE: Department Chemistry, Rutgers University, Piscataway, NJ, 08854, USA
SOURCE: Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), PMSE-135. American Chemical Society: Washington, D. C.
CODEN: 65QTAA
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB A series of novel polymers with hydrophobic interiors and hydrophilic exteriors that resemble conventional micelles structurally have been successfully synthesized. These polymers consist mostly of known biocompatible components such as mucic acid (a sugar), fatty acids and polyethylene glycols (PEG) to create biocompatible polymers. The four hydroxyl groups of mucic acid are acylated by acyl chlorides of various alkyl chains (i.e. propanoyl, hexanoyl and lauroyl), followed by coupling to the core mol., 1,1,1-tris(hydroxyphenyl)ethane, to yield large hyperbranched cores. H2N-PEG-m with different chain lengths (TEG, PEG2000, PEG5000) are attached to the cores in the presence of DCC/DMAP to give the desired polymers. Compds. were characterized by 1H and 13C NMR, IR, MS, elemental anal. and m.ps. and polymer anal. methods such as GPC, DSC and TGA. By changing the hydrophobic/hydrophilic ratio, several property-structure relationships (e.g., water-solubility) have been established. In vitro degradation studies have also been performed.
AN 1998:140448 HCAPLUS

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